

TRANSACTIONS
OF THE
NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 25, 1906.

The President, DR. GEORGE WOOLSEY, in the Chair.

REMOTE RESULTS OF OPERATION FOR THE RADICAL CURE
OF INGUINAL HERNIA.

DR. WILLIAM B. COLEY presented a young man upon whom he had operated fourteen years ago, by the Bassini method, for a left inguinal hernia which had existed since infancy. The hernia had been temporarily cured by a truss, but had relapsed. The operation had effected a perfect cure, and there were no indications of a recurrence at the present time. The operation had produced no effect upon the development of the testis. The patient was now married, and the father of two healthy children.

DR. JOHN B. WALKER presented a man upon whom he had operated ten years ago for a congenital left-sided inguinal hernia. There were no evidences of a recurrence up to the present time, but the patient had returned to be relieved of a hernia on the opposite side, which had recently developed as the result of a strain.

CARCINOMA OF THE MALE BREAST.

DR. WILLIAM B. COLEY presented a man, 64 years old, with a carcinoma of the left breast. The case was shown on account of the comparative rarity of this condition in the male, and because of the fact that it had existed for ten years, an unusually long period. The lesion was of traumatic origin, coming on two months after a blow from a rowbar. For four years it

slowly increased in size. It was then treated for about a year with applications of plaster, under the influence of which it slightly diminished in size. Since then the man had had no treatment. The lesion was more or less fungoid in its outer portion, and extended upward almost to the axilla. The axillary and supraclavicular glands were enlarged and hard. The man had been able to continue at his work, which was that of a laborer, until two months ago.

Dr. Coley said that this was the fourth case of cancer of the male breast that had come under his observation. In three of them there was a traumatic history. According to Roger Williams, the comparative frequency of this lesion in the male and female was as one to one hundred and seventeen, and in sixty per cent. of the cases there was an antecedent traumatic history. The duration of life averaged eight months longer in the male than in the female, and the number of cures following operation was comparatively small. In fourteen cases traced by Williams, only two remained exempt from recurrence.

DILATATION AND HYPERTROPHY OF THE STOMACH.

DR. CHARLES N. DOWD presented a woman, forty years of age, who was admitted to the General Memorial Hospital last January. For a year she had had gastric disturbance, which for several weeks had been extreme. Vomiting had been the most prominent symptom. This came at irregular intervals, usually after eating. The vomitus was usually sour undigested material, and on one or two occasions food returned which had been taken several days before. She was constipated, having one or two small movements a week, and she was much emaciated. The abdomen had become much distended, so that a diagnosis of large ovarian cyst had been made by more than one physician. She came to the Out-Patient Department of the hospital, and a stomach-tube was introduced and eleven pints of semifluid, very offensive material were withdrawn. A series of stomach washings was undertaken in the hospital to test the stomach's ability to empty itself, and it was found that although much of the food which was taken at supper could be withdrawn in the morning, the stomach would occasionally empty itself through the night. Analysis of the gastric contents showed absence of free hydrochloric acid and a

trace of lactie acid; total acidity, .2555; acid salts and organic acids, .1095; combined hydrochlorie acid, .1450.

January 3d a gastro-enterostomy was done by the clamp method, attaching the uppermost part of the jejunum to the dependent part of the posterior stomach-wall. The stomach was so thick that it could not be held by the ordinary clamps which are used as an aid in sewing the stomach and intestinal walls together. The stomach-wall was about four times its ordinary thickness. The patient made an uneventful recovery; has gained very much in weight, and is now in good health. The condition was due to cicatricial pylorie stenosis, with no evidence of malignant growth.

ISCHÆMIC MUSCULAR ATROPHY.

DR. CHARLES N. DOWD said that in the April issue of the *ANNALS OF SURGERY* attention had been drawn to this condition by Dr. Ferguson, of Chicago. In the *Lancet* of January 11, 1902, there was an article by Dugcon, in which he reported four new cases and described eleven others, and there are many references to the subject in surgical literature under the terms Volk-mann's contracture, ischæmic paralysis, ischæmic muscular atrophy, etc. It is certainly not pleasant to think that so serious a condition may result from a fracture treated apparently according to ordinary methods. Yet the patient which he now presented, was the second one who had been brought to St. Mary's Hospital with this condition during the year. The contracture ordinarily comes in children, and usually follows a fracture about the elbow-joint. In this instance, a child four years old, the fracture, just above the elbow-joint, occurred a year and a half ago. It was treated by putting the arm in splints and keeping it there for four weeks. After the removal of the splints only moderate stiffness in the elbow and fingers was noticed, but soon the fingers became more flexed, and inability to extend them was more noticeable. Their tips were drawn into the palm of the hand, so that the nails irritated the skin there. A sore also came on the tip of the little finger, which sloughed and healed at a later time. There was only moderate improvement for the following year, and when the child came to the hospital six months ago the fingers were contracted about half way to the palm, and could not



FIG. 1.—Ischaemic muscular atrophy with contracture of hand.

be extended unless the wrist was flexed, in which case they could be straightened, a characteristic symptom of this condition. The forearm was atrophied. The muscles on its anterior surface seemed hard. Sensation was good all over the arm, and the skin had almost a normal appearance, but was slightly glossy. The muscles all reacted to faradism. Supination was restricted to about half the normal amount. This symptom, the attending physician said, did not exist when the splints were first removed, but increased gradually.

The accompanying photograph shows the hand extended as far as she was able to extend it. She could flex the fingers so as to touch the palm. After consultation with neurologists, massage was used and was continued daily with much care for about three months, when she contracted measles. The gain under this treatment was so slight that it could not be appreciated. After her recovery from measles incisions were made to inspect the condition of the muscles and nerve. The flexor muscles of the forearm were found to be hard, fibrous, pale, and atrophied. The median nerve was somewhat pressed upon by the upper fragment of the old fracture, and seemed a little denser at the site of this pressure than below it. The musculo-spiral nerve seemed normal. The ulnar nerve was displaced, and lay to the inner side of the internal condyle instead of in the groove between it and the olecranon. No change in its texture could be distinguished. It was replaced in its proper position.

In the second case which has been treated in the hospital this winter a similar dissection onto the median nerve had shown that it was pressed upon by a sharp spicule of bone which projected from the upper fragment of the fracture. Sufficient time has not elapsed to determine whether the relief from pressure of these nerves will affect the contracture. The reports, however, from most of the cases which have occurred indicate that the lesion in the muscle cannot be ascribed to the nerve. Volkmann, in his original description, considered the muscle change to be due to anaemia, usually from splint-pressure, and this explanation has generally been accepted. In about half the cases which have been reported there are scars from pressure-sores over the muscles. A similar condition has been reported by Mr. Davies-Colley in the calf muscles from a fracture of the tibia and fibula and subsequent suppuration. In one instance a characteristic ischaemia

contracture of the forearm followed a bullet-wound in the axilla, with a thrombosis of the axillary artery. In neither of the speaker's cases has there been any evidence of a pressure-sore. The treatment which has been most successful is massage and tendon-lengthening. The speaker expected to lengthen the flexor tendons in this case unless improvement soon followed the massage.

DR. ROYAL WHITMAN said that the contraction was not entirely limited to the flexor muscles. In addition to the loss of supination and extension at the elbow, to which Dr. Dowd had referred, there was also some limitation of flexion at the wrist, the muscles on the dorsal surface of the forearm being somewhat shortened, as well as those on the flexor surfaces.

CHRONIC HYPERTROPHIC SYNOVITIS OF THE KNEE JOINT.

DR. JOHN A. HARTWELL presented a man, twenty years of age, who was admitted to the Lincoln Hospital on February 12, 1906, and gave the following history: In childhood he had some glandular enlargement in the neck, which required surgical attention. He had never been of a very robust type, but had been able to do hard work for several years past. About three years before admission, while jumping from a wagon, he sustained a slight injury of the right knee, which was not sufficient to cause disability at the time. The next day, however, the knee began to swell, and he gave up his work for four or five days, but was not confined to bed. Since that time he had worked continuously as an express-driver and handler, though his knee sometimes pained him a little, and was more or less swollen. For three weeks previous to admission these conditions had been rather more marked than before.

Physical examination on admittance to hospital: Appearance—Patient fairly well nourished; slightly anæmic; rather tubercular type. Heart—Normal. Lungs—Expansion poor; clavicles prominent; expiration prolonged at right apex; higher pitched; slight cogged-wheel rhythm. Abdomen—Negative. Glands—scar on left side of neck where glands were removed in childhood; otherwise glands not enlarged.

Extremities—Left shoulder slightly stiff, and painful on movement; right leg swollen at knee; not inflamed; no heat redness

nor pain when quiescent; all ligaments intact; movements restricted; flexion only to right angle; full extension possible; pain in the knee on walking; patella riding high; swelling laterally and up in eul-de-sac very marked; no movable bodies felt; no signs of fracture.

The extremities measured as follows: Right extremity—Calf, $10\frac{5}{8}$ in.; 6 in. above knee, $13\frac{1}{2}$ in.; above patella, $12\frac{5}{8}$ in.; over patella, $13\frac{3}{8}$ in.; below patella, $12\frac{3}{8}$ in. Left extremity—Calf, $11\frac{3}{8}$ in.; 6 in. above knee, $15\frac{1}{2}$ in.; above patella, $12\frac{1}{8}$ in.; over patella, $12\frac{5}{8}$ in.; below patella, $11\frac{3}{8}$ in.

The boy's general appearance, the sear of early glandular trouble in the neck, and the suspicious conditions found in the lungs, together with the very marked atrophy of the right thigh and leg, suggested the possibility of a tubercular synovitis. The absence of muscular spasm, of pain, and of any evidence of bone involvement after so long a history, argued, however, against this, and after ten days' rest in bed in order to allow the acute symptoms to subside, exploration was deemed advisable, and was done on February 20th, as follows:

After the usual preparation of the leg from the toes to the thigh an incision was made $3\frac{1}{2}$ inches long on the inner side of the patella. This was carried down through the skin and subcutaneous tissues, which were normal. Bleeding-points clamped. Incision was now made down through the joint capsule, which was found much thickened, and very vascular. Then the synovial membrane was opened. This was also very thick and succulent. Tissues cut with scissors to enlarge deeper cut to limits of skin incision. Joint cavity exposed and examined. Everywhere the synovial membrane was thickened with villous-like processes, and very vascular and inflamed. Bleeding-points caught as met. Ligamentum alaria especially inflamed. All the abnormal tissue now in sight was removed with scissors and forceps, including most of the ligamentum alaria. The joint was irrigated with hot saline solution. Leg was now flexed at the knee, and more of the fungoid material reached and cut away. Another irrigation followed. Tissue removed in noteh down to crucial ligaments. Irrigation of the joint was again thoroughly accomplished. No disease of the bone found. Synovial membrane sewed up with continuous catgut suture, vessels being tied off with fine catgut. Capsule also closed with interrupted catgut;

skin with continuous silk. Rubber tissue drain carried down to the synovial membrane. Dressing applied, and leg put on posterior splint.

February 24th.—Rubber tissue drain removed. Wet dressing applied, because of a slight redness along the stitch-line.

February 26th.—Redness entirely subsided, and primary union resulted. The splint was removed on the twelfth day and passive motion of the joint allowed. Patient was allowed to walk on twelfth day and left the hospital three weeks after the operation. He returned to work on April 15th, about four weeks after the operation, and has had no difficulty with the joint since then. Examination at the present time, about five weeks after the operation, shows a normal functioning joint, with no effusion, and only a very slight thickening of the capsule. The atrophy of the thigh and leg, however, are the same as before the operation.

Pathological findings of the joint contents were as follows: Fluid consisted of blood-stained serum, with well-marked fibrin clot on standing. The cellular count showed: Polynuclear cells, 28 per cent.; small mononuclear, 6 per cent.; endothelial, 66 per cent.; red cells, 4 to 1 white. Section of synovial membrane shows thickening and hypertrophy of the membrane and fringes, due to (1) increased amount of fatty tissue; (2) new growth of connective tissue—*i.e.*, vascular and cellular tissue; (3) areas of small round-cell infiltration; (4) increase in depth of layer of marginal cells, closely packed connective-tissue cells, with little or no intercellular substance. No evidence of tubercular or purulent infiltration. Tissue and fluid were both found to contain no bacteria as tested by smears, cultures, stains, sections and injections into guinea-pigs.

Dr. Hartwell said he showed the case as one of chronic hypertrophic synovitis of the knee-joint, the lipoma arborescens of the German writers. The unusual features in the case, he thought, were the very marked atrophy where no actual disuse was present; the very good recovery following the operation, and the pathological condition within the joint, showing that these cases could probably be restored to health only in this way.

DR. ROYAL WHITMAN said he did not think marked atrophy was particularly unusual in cases of persistent synovitis, or in any affection of the joint. Atrophy incidental to disuse did not neces-

sarily mean disuse of weight bearing and motion, but rather a physiological disuse which affected the nutrition of the muscles.

DR. HARTWELL, in reply to Dr. Whitman, said that in his case the patient had apparently used the affected limb very actively. His work was that of an expressman, and he was constantly jumping on and off the wagon. According to the history, he did not favor the limb at all until just prior to his admission to the hospital.

SUBDURAL HÆMORRHAGE.

DR. JOHN A. HARTWELL presented a man, aged 49 years, colored, who was admitted to Lincoln Hospital on February 27, 1906, with the following history: On February 21 he was struck on the head by a large piece of timber falling from a height of one or two stories. He was knocked to the ground, was picked up unconscious and taken to the Lebanon Hospital in an ambulance. He regained consciousness in about twenty minutes, but was excitable and irritable. There was a large scalp-wound over left parieto-temporal region, which was sutured. He continued in his irritable and rather unmanageable condition during the next six days without, however, manifesting any focal cerebral symptoms. In addition to his irritability, he had had several attacks of vomiting. On his admission to Lincoln Hospital, six days after the injury, the following notes were made: Patient has a healed scar on the left side of his head, six inches long and curved like an operative incision. Patient seems drowsy, yet at intervals he is irritable, restless and unmanageable, trying to get out of bed. Patient does not respond to questions, and on being aroused, looks at one with a vacant expression. Heart, lungs and abdomen, all negative. Extremities: No change in sensations apparent. No paresis or paralysis. Reflexes, markedly increased. Control of bladder and rectum perfect. No facial paralysis or change in pupils.

Shortly after admission patient had a convulsion, which was reported by the attendant to be general in character. During the following three days the convulsions were repeated several times, were of very short duration, and no evidence that they were at all localized could be obtained. On March 2 these convulsions began to occur with great frequency, about every twenty minutes,

for periods of an hour at a time, followed by a period of rest. They were becoming longer in duration, and the following notes on their character were then made: First there was a vacant staring expression of the eyes, with a gradual conjugate deviation toward the left; after about four or five seconds there was a tonic contraction of the muscles of the left side of the face, then a drawing of the head downward on the left shoulder with an elevation of the latter; then tonic contractions in the arm, and then in the leg of left side. This phase occupied about fifteen seconds, and was followed by clonic spasms of the same parts and in the same order. The whole convulsion lasted from sixty to ninety seconds, during which the patient was totally unconscious. He then gradually regained consciousness and the contractions ceased. At this time, when he had had altogether about twelve convulsions, he for the first time showed a decided left facial paralysis and marked weakness of left arm and leg. This was on the ninth day after the injury, the first convulsion having been noted on the seventh. On the eighth day his condition was apparently improved. Operation was performed March 2, nine days after the injury, and as soon as the localized character of the convulsion and the paralysis was evident. Under ether, a curved incision was made just above the right temporal ridge, about eight inches in length and carried directly down to the skull, the flap being turned downward. The fissure of Rolando was now marked out, and a trephine opening made over the face center and enlarged upward with the trephine to an area of about two inches in diameter. The dura showed no pulsation, and a clot could be seen beneath it. Dura was divided around the line of the bone opening, and a large organized clot was removed from the cerebral cortex. Electrodes applied to the facial center produced a prompt contraction of the muscles of the face on the left side. No response could be obtained in either of the extremities, possibly because the nerve-cells here were too much damaged by the compression, though the paralysis of the face had indicated a greater involvement of the cells for that part. Inspection, however, indicated that the cells for the arm were more damaged than those of the face. The opening in the skull was hardly extensive enough to reach the leg center. The dura mater was closed with catgut sutures, a small, rubber tissue drain put down through it, and the scalp sutured back in place. It was noted

that the scalp was quite oedematous, probably due to lymphangitis following the original scalp-wound.

Postoperative notes: March 4—Recovered from anaesthetic without incident. Slightly excited during first twelve hours and then became rational, but continues rather stuporous. Can be aroused, and gives correct account of injury and other details of his residence, work, etc. Still has considerable weakness of left upper extremity, and less of the lower extremity. Is able to make coöordinated movements. Slight spasticity of lower extremity left side, none of upper. Left-sided facial paralysis, and left deviation of tongue. Upper branch of facial less paralyzed than lower. Examination of reflexes unsatisfactory. No ocular paralysis.

March 6.—Patient less rational than formerly. More stuporous. Complains of pressure on head. Very restless. Left arm can be moved only with great difficulty. Face more markedly paralyzed. Wound examined and pus found along the suture line. Considerable distention. Opened after stitches were removed. Infection all through the scalp, due to previous lymphangitis. Pus infiltrating tissues down to the dura. Dura thickened and brain apparently well walled off by dense adhesions. Wound area opened up widely and dressed with free drainage and bichloride solution.

March 9.—Wound very much cleaner. Both sides granulating well. In center, still suppurating. Left arm can be moved more freely.

March 11.—Wound granulating well. Patient more rational. Movements on left side stronger.

March 13.—Patient improves slowly. Mind brighter. Movements of left side gradually returning. Can put left hand to nose and mouth with effort. Cannot hold up a single finger of left hand.

March 15.—Wound granulating well. Pulsations fair. Complains of being in bed. Left facial paralysis less marked. Can nearly hold up finger of left hand.

March 27.—Wound granulating well; nearly free from pus. Mental condition practically normal. Left leg can be used nearly as well as the right. Left arm not so powerful as right. Power of coöordinated movements not entirely regained. With eyes shut, fingers do not meet by several inches. Left not so strong as right.

Facial paralysis still slightly present on left side of face. Left eye cannot be shut tight. Left angle of mouth can be drawn back but a very little.

April 10.—Patient was discharged, forty days after the operation. Wounds entirely closed, but still showed slight incoördination of left side of body, and slight left-sided facial paralysis. He walks without any dragging of the foot. Mentally, he is normal.

April 25.—Eight weeks after the operation there is absolutely no evidence of his injury remaining except the scars on his head, and the brain pulsation beneath the opening in the skull. There is no evidence of any irritability of the brain due to adherent dura.

THE ADVISABILITY OF EARLY OPERATION IN INTRACRANIAL HÆMORRHAGE OF TRAUMATIC ORIGIN.

DR. FRANK W. MURRAY read a paper with the above title (for which see page 374).

DR. JOHN A. HARTWELL said the condition of intracranial hæmorrhage of traumatic origin, which Dr. Murray had discussed in his paper, was constantly coming under the observation of the surgeon, especially in hospital practice, and it was often very difficult for him to decide what to do. The problems that confronted the surgeon were whether the condition was sufficiently localized to admit of operation, and, furthermore, whether he would be able to locate the site of the hæmorrhage.

In a case reported at one of the previous meetings of the Society, Dr. Hartwell said, the patient, a child, was brought to the hospital in a semi-comatose condition as the result of a fall on the head. Within thirty minutes after admission, the coma was complete. There were no localizing symptoms, and in their absence, Dr. Hartwell decided to do the decompression operation as described by Cushing, turning down the fascia of the temporal muscle, splitting the muscle, and then trephining over the so-called "silent area." The dura was found much distended, and upon incising it, serosanguineous fluid spurted out with considerable force. The brain was œdematosus in appearance, and there was no pulsation in it for several minutes after opening the dura; then the pulsations returned, and its appearance became normal.

The intracranial pressure was so great that it was impossible

to suture the dura in its normal position. The muscles, however, were sutured, and the child made an uneventful recovery, and two and a half months later showed no evidence of trouble from the loss of bone and dura. Prior to the accident, the child had been slightly deaf on the affected side, and subsequently that defect became more pronounced.

In the second case reported by Dr. Hartwell, the patient, after a fall of six or eight feet, sustained a very severe injury of the head. Upon examination, he had a large haematoma of the skull, but there were no signs of fracture. Upon operation, a large subdural haemorrhage was found, extending over the whole surface of the brain. The patient died shortly afterwards, and at the necropsy, a slight fracture at the base was found. The symptoms in this case were those of severe concussion, which was practically caused by multiple minute haemorrhages from the small vessels of the brain.

Dr. Hartwell said he agreed with Dr. Murray that if these cases were more carefully watched, many could be saved by early operative interference. Operation was too often neglected because of the absolute absence of localizing symptoms.

Dr. GEORGE Woolsey said he was interested in the statement made by Dr. Murray in regard to the relative number of cases in which there was no actual injury to the brain, only the compression from the clot. In many cases there were no localizing symptoms, and sometimes it even could not be determined whether or where a blow had been struck. In these cases of head injury, neurologists were rather inclined to attribute the symptoms to actual laceration of the brain, and were rather disinclined to advise operative interference. Personally, Dr. Woolsey said, he favored an exploratory operation in every instance where there were any focal symptoms of pressure, or where there was a localized injury with general pressure symptoms.

Last summer, Dr. Woolsey said, a boy was brought to the hospital after having sustained a fall from a fire escape. He had mild convulsions, with intervals of semi-coma, there was a moderately slow pulse, and some symptoms indicating brain-pressure. An operation was done, and upon incising the dura, no haemorrhage was found, but there was an increased amount of cerebro-spinal fluid, and the surface of the brain was boggy and oedematous. The evacuation of the cerebro-spinal fluid gave

the patient some relief, and he eventually made a good recovery. In that case there were no evidences of a clot to account for the symptoms.

DR. MURRAY, in closing, said a history of trauma was one of the most important factors in deciding the surgeon to operate. Of course, where there was depression of bone the indications for surgical interference were clear, but in many of these cases there was simply a haematoma. In cases of subdural haemorrhage where the coma often persisted for days, and in dealing with which the attitude of most surgeons was very conservative, the speaker thought that an exploratory operation was advisable, in spite of the old idea taught in the text-books that most of those cases would recover without operation. The chief points that influenced him to operate on such a case were the appearance of choked disk, slow pulse, and increased blood-pressure as indicated by the manometer.